



ENVIRONMENTAL PROTECTION AGENCY

6560-50

[FRL-9673-3]

INTENT TO GRANT PATENT LICENSE

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Intent to Grant Co-Exclusive Patent License.

SUMMARY: Pursuant to 35 U.S.C. 207 (Patents) and 37 CFR Part 404 (U.S. Government patent licensing regulations), EPA hereby gives notice of its intent to grant a co-exclusive, royalty-bearing, revocable license to practice the inventions described and claimed in the U.S. patents and patent applications listed at the end of this message, and all corresponding patents issued throughout the world, and all reexamined patents and reissued patents granted in connection with such patent applications, to American Hydraulic Power, LLC of Michigan.

The inventions pertain to hybrid vehicle technology, particularly hydraulic hybrid drive systems, methods, and components. The proposed license will contain appropriate terms, limitations, and conditions negotiated in accordance with 35 U.S.C. 209 and 37 CFR 404.5 and 404.7 of the U.S. Government patent licensing regulations. EPA will finalize terms and conditions and grant the license unless, within 15 days from the date of this notice, EPA receives, at the address below, written objections to the grant, together with supporting documentation. The documentation from objecting parties having an interest in practicing the inventions listed in the patents and patent applications below should include an application for a nonexclusive license with the information set forth in 37 CFR 404.8. The EPA Patent Attorney and other EPA officials will review all written responses and then make recommendations on a final decision to the Director or Deputy Director of the Office of Transportation and Air Quality,

who have been delegated the authority to issue patent licenses under EPA Delegation 1-55.

The proposed license will apply to the following patents and patent applications:

METHOD OR VEHICLE LICENSED INVENTIONS

<u>Patent Number</u>	<u>Title</u>	<u>Date Issued</u>
5,495,912	Hybrid Powertrain Vehicle	March 5, 1996
5,887,674	Continuously Smooth Transmission	March 30, 1999
6,719,080	Hydraulic Hybrid Vehicle	April 13, 2004
6,876,098	Methods of Operating a Series Hybrid Vehicle	April 5, 2005
7,456,509	Methods of Operating a Series Hybrid Vehicle (div)	November 25, 2008
7,337,869	Hydraulic Hybrid Vehicle with Integrated Drive Module and Four-Wheel-Drive, and Method of Operation Thereof	March 4, 2008
7,252,020	Vehicle Drivetrain including a Clutchless Transmission, and Method of Operation	August 7, 2007
6,998,727	Methods of Operating a Parallel Hybrid Vehicle Having an Internal Combustion Engine and a Secondary Power Source	February 14, 2006
7,104,349	Hybrid Powertrain Motor Vehicle with Homogenous Charge Compression Ignition (HCCI) Engine, and Method of Operation Thereof	September 12, 2006
7,857,082	Methods of Operating a Series Hybrid Vehicle (Div.)	December 28, 2010
7,984,783	Hydraulic Hybrid Vehicle with Integrated Hydraulic Drive Module and Four-Wheel-Drive, and Method of Operation Thereof (Div.)	July 26, 2011
8,118,132	Hydraulic Hybrid Vehicle Methods of Safe Operation	February 21, 2012
8,162,094	Hydraulic Hybrid Vehicle with Large-Ratio Shift Transmission, and Method of Operation	April 24, 2012

<u>Application Number</u>	<u>Title</u>	<u>Date Filed</u>
PCT/US2011/ 027667	Hydraulic Hybrid Vehicle with Safe and Efficient Hydrostatic Operation	March 9, 2011
12/654,321	Methods of Optimizing Efficiency of a Series Hybrid Vehicle with Multi-Gear Transmission	December 17, 2009
12/711,603	Hydraulic-Electric Regenerative Energy Storage System	February 24, 2010
PCT/US2011/ 031806	Methods for Safe Operation of Hydraulic Hybrid Vehicles with Over-Center Pump/Motors	April 8, 2011
12/731,326	Regenerative Energy Storage System for Hybrid Locomotive	March 25, 2010
12/955,795	Methods of Operating a Series Hybrid Vehicle (Div.)	November 29, 2010
13/356,276	Hydraulic Hybrid Vehicle Methods of Safe Operation	January 23, 2012
13/424,027	Hydraulic Hybrid Vehicle with Large-Ratio Shift Transmission, and Method of Operation Thereof	March 19, 2012
61/619,123	Hydraulic Hybrid Vehicle Control Methods	April 2, 2012

HYDRAULIC COMPONENT LICENSED INVENTIONS

<u>Patent Number</u>	<u>Title</u>	<u>Date Issued</u>
6,619,325	Hydraulic Hybrid Accumulator Shut-off Valve	September 16, 2003
6,996,982	Method and Device for Switching Hydraulic Fluid Supplies, such as for a Hydraulic Pump/Motor	February 14, 2006
7,014,429	High-Efficiency, Large Angle, Variable Displacement Hydraulic Pump/Motor	March 21, 2006
7,108,016	Lightweight Low Permeation Piston-in-Sleeve Accumulator	September 19, 2006
7,121,304	Low Permeation Hydraulic Accumulator	October 17, 2006
7,305,914	Hydraulic Actuator Control Valve	December 11, 2007
6,170,524	Fast Valve and Actuator	January 9, 2001

7,305,915	Efficient Pump/Motor with Reduced Energy Loss	December 11, 2007
7,374,005	Opposing Pump/Motors	May 20, 2008
7,500,424	Hydraulic Machine Having Pressure Equalization	March 10, 2009
7,527,074	Hydraulic Pressure Accumulator	May 5, 2009
7,537,075	Hydraulic Hybrid Vehicle with Integrated Hydraulic Drive Module and Four-Wheel-Drive, and Method of Operation Thereof (Div.)	May 26, 2009
7,553,085	Fluid Bearing and Method of Operation	June 30, 2009
7,594,802	Large Angle Sliding Valve Plate Pump/Motor	September 29, 2009
7,617,761	Opposing Pump/Motors (divisional)	November 17, 2009
7,677,871	High-Efficiency, Large Angle, Variable Displacement Hydraulic Pump/Motor (Divisional)	March 16, 2010
8,052,116	Quiet Fluid Supply Valve	November 8, 2011
8,100,221	Engine-Off Power Steering System	January 24, 2012
8,020,587	Piston-in-Sleeve Hydraulic Pressure Accumulator	September 20, 2011
7,987,940	Hydraulic Accumulator and Fire Suppression System	August 2, 2011

<u>Application No.</u>	<u>Title</u>	<u>Date Filed</u>
11/233,822	Independent Displacement Opposing Pump/Motors and Method of Operation	September 22, 2005
11/540,089	Safe Over-Center Pump/Motor	September 29, 2006
12/701,438	Variable Length Bent-Axis Pump/Motor	February 5, 2010
12/567,938	Hydraulic Circuit and Manifold with Multi- Function Valve	September 28, 2009
13/415,109	Modular Hydraulic Hybrid Drivetrain	March 8, 2012
13/232,677	Engine-Off Power Steering System	September 14, 2011
12/215,438	On-Demand Power Brake System and Method	June 26, 2008

13/433,839	On-Board Hydraulic Fluid Degasification System for a Hydraulic Hybrid Vehicle	March 29, 2012
61/609,597	Radial Hydraulic Motor for a Hydraulic Hybrid Vehicle	March 12, 2012
61/635,085	Integrated Hydraulic Accumulator Dual Shut-Off Valve	April 18, 2012

DATE: Comments on this notice must be received by EPA at the address listed below by [insert date 15 days after date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: David Read, Attorney Advisor,
Environmental Protection Agency, National Vehicle Fuel Emissions Laboratory, Office of Air
and Radiation, 2565 Plymouth Road, Ann Arbor, MI 48105, telephone (734) 214-4367.

Dated: May 10, 2012.

Geoff Cooper,
Assistant General Counsel,
General Law Office.

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